fluoride concentrations occur primarily in regions of Yavatmal and Chandrapur. Dental fluorosis was observed in five villages in Chandrapur district and in two villages in Yavatmal district, whereas skeletal fluorosis was found in two villages of Chandrapur district. Among the 416 subjects surveyed 41 (17.86%) and 23 (16.33%) subjects had signs and symptoms of either dental or skeletal or both types of fluorosis. The spatial distribution of fluoride in groundwater, as indicated by hydrogeochemical analyses, correlated well with the prevalence of dental and skeletal fluorosis. Because the region falls in an industrial coal-mining belt, a large fraction of the population is at risk for fluorosis. Utilization of water from phreatic aquifers will minimize the incidence of fluorosis in the endemic areas from deep wells that are discharging fluoride-contaminated groundwater. To cope with these problems, a multi-sectoral approach is needed that includes broad community participation, installation of appropriate types of pumps, and new, less-polluting irrigation methods.

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DRINKING WATER FLUORIDE CONCENTRATION AND ITS RELATIONSHIP WITH DMFT INDEX IN MIANEH CITY, IRAN

The purpose of this research was to determine the fluoride concentration in drinking water of Mianeh city in the province of East Azerbaijan, Iran. This cross-sectional research was carried out on all 14 groundwater sources of drinking water in 2008. The results show that the mean fluoride concentration in spring, summer, autumn, and winter was 0.295±0.039, 0.47±0.17, 0.48±0.18, and 0.4±0.06 mg/L, respectively. Moreover, the concentration of fluoride in all water sources was below the permissible concentration based on Iran drinking water standards, but it was in standard range proposed by WHO. In addition, the DMFT index of the children between 6 and 9 years old in Mianeh was higher than the Iran DMFT index.

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HUMAN SKELETAL FLUOROSIS IN INDIA

Fluoride is a major health concern in India, especially because of the warm climate and relatively high levels of fluoride in many drinking water sources. With excessive intake, fluoride can have serious toxic effects that are manifested in various forms and severity in the form of fluorosis. In the body, fluoride toxicity is